Amendments to the Claims

- 1. (Currently Amended) A transgenic cell wherein the genome of said cell comprises a nucleic acid molecule wherein said nucleic acid molecule is selected from the group consisting of;
 - i) a nucleic acid molecule comprising a nucleic acid sequence as represented in Figure SEQ ID NO: 1;
 - ii) a nucleic acid molecule comprising a nucleic acid sequence which hybridises to the sequence in (i) above and which glucosylates at least one monolignol; or
 - a nucleic acid molecule comprising a nucleic acid sequences which are degenerate as a result of the genetic code to the sequences defined in (i) and (ii) above.
- 2. (Currently Amended) A The cell according to Claim 1 wherein said-aldehyde of a monolignol is selected from the group consisting of; p-coumaryl aldehyde, coniferyl aldehyde and sinapyl aldehyde.
- 3. (Currently Amended) A <u>The</u> cell according to Claim 2 wherein said monolignol is coniferyl alcohol.
- 4. (Currently Amended) A <u>The</u> cell according to any of <u>Claims 1-3</u> claim 1, wherein said nucleic acid is cDNA.
- 5. (Currently Amended) A <u>The</u> cell according to any of Claims 1-3 claim 1, wherein said nucleic acid is genomic DNA.
- 6. (Currently Amended) A <u>The</u> cell according to any of Claims 1-5 claim 1, wherein said nucleic acid molecule comprises a nucleic acid sequence as shown in <u>Figure SEQ ID NO:</u> 1.
- 7. (Currently Amended) A <u>The</u> cell according to any of Claims 1-4 claim 1, wherein said nucleic acid molecule consists of a nucleic acid sequence as shown in Figure SEQ ID NO: 1.

Express Mail No. EV668296764US
Date of Deposit: April 6, 2006
Attorney Reference Number 5585-74167-01
Application Number Currently unknown

SLR:slr:dm 04/04/06 500961.doc P103161US

PATENT

- 8. (Currently Amended) A <u>The</u> cell according to any of <u>Claims 1-7</u> claim 1, wherein said nucleic acid molecule is over expressed.
- 9. (Currently Amended) A <u>The</u> cell according to Claim 8 wherein said cell over-expresses a nucleic acid molecule selected from the group consisting of:
 - i) a nucleic acid molecule comprising a nucleic acid sequence as represented in Figure SEQ ID NO: 1 and Figure SEQ ID NO: 3 and/or Figure SEQ ID NO: 5;
 - ii) a nucleic acid molecule comprising a nucleic acid sequence which hybridises to the sequence in (i) above and which glucosylates at least one monolignol; or
 - iii) a nucleic acid molecule comprising a nucleic acid sequences which are degenerate as a result of the genetic code to the sequences defined in (i) and (ii) above.
- 10. (Currently Amended) A <u>The</u> cell according to Claim 8 wherein said cell over-expresses a nucleic acid molecule as represented by the nucleic acid sequence shown in <u>Figure SEQ ID NO</u>: 3 and <u>Figure SEQ ID NO</u>: 5, or a nucleic acid molecule which hybridises to a nucleic acid molecule as represented by the nucleic acid sequence in <u>Figure SEQ ID NO</u>: 3 and <u>Figure SEQ ID NO</u>: 5.
- 11. (Currently Amended) A <u>The</u> cell according to any of <u>Claims 1-7 claim 1</u>, wherein the expression of said nucleic acid molecule is down-regulated to reduce glucosyltransferase activity in said cell.
- 12. (Currently Amended) A <u>The</u> cell according to Claim 11 wherein said down-regulation is as a result of said cell being null for a nucleic acid molecule selected from the group consisting of;
 - i) a nucleic acid molecule comprising a nucleic acid sequence as represented in Figure SEQ ID NO: 1;
 - ii) a nucleic acid molecule comprising a nucleic acid sequence which hybridises to the sequence in (i) above;

Express Mail No. EV668296764US
Date of Deposit: April 6, 2006
Attorney Reference Number 5585-74167-01
Application Number Currently unknown

SLR:slr:dm 04/04/06 500961.doc P103161US PATENT

- as a result of the genetic code to the sequences defined in (i) and (ii) above.
- 13. (Currently Amended) A <u>The</u> cell according to Claim 11 wherein said down-regulation is as a result of said cell being null for a nucleic acid molecule selected from the group consisting of;
 - i) a nucleic acid molecule comprising a nucleic acid sequence as represented in Figure SEQ ID NO: 1 and Figure SEQ ID NO: 3 and/or Figure SEQ ID NO: 5;
 - ii) a nucleic acid molecule comprising a nucleic acid sequence which hybridises to the sequence in (i) above;
 - iii) a nucleic acid molecule comprising a nucleic acid sequences which are degenerate as a result of the genetic code to the sequences defined in (i) and (ii) above.
- 14. (Currently Amended) A <u>The</u> cell according to Claim 11 wherein said down-regulation is the result of said cell being null for a nucleic acid molecule comprising a nucleic acid sequence as shown in <u>Figure SEQ ID NO:</u> 3 and <u>Figure SEQ ID NO:</u> 5, or a nucleic acid molecule which hybridises to a nucleic acid molecule comprising a nucleic acid sequence as shown in <u>Figure SEQ ID NO:</u> 3 and <u>Figure SEQ ID NO:</u> 5.
- 15. (Currently Amended) A <u>The</u> cell according to Claim 11 wherein said cell is transformed with a nucleic acid molecule comprising an expression cassette which cassette comprises a nucleic acid sequence selected from the group consisting of:
 - i) a nucleic acid molecule comprising a nucleic acid sequence as represented in Figure SEQ ID NO: 1;
 - ii) a nucleic acid molecule comprising a nucleic acid sequence which hybridises to the sequence in (i) above and which glucosylates at least one monolignol; or
 - iii) a nucleic acid molecule comprising a nucleic acid sequences which are degenerate as a result of the genetic code to the sequences defined in (i) and (ii) above[[.]],

wherein said cassette is adapted such that both sense and antisense nucleic acid molecules are transcribed from said cassette.

Express Mail No. EV668296764US

Date of Deposit: April 6, 2006

Attorney Reference Number 5585-74167-01

Application Number Currently unknown

SLR:slr:dm 04/04/06 500961.doc P103161US

PATENT

16. (Currently Amended) A The cell according to Claim 15 wherein said cassette is provided

with at least two promoters adapted to transcribe sense and antisense strands of said nucleic acid

molecule.

17. (Currently Amended) A The cell according to Claim 15 wherein said cassette comprises

a nucleic acid molecule wherein said molecule comprises a first part linked to a second part

wherein said first and second parts are complementary over at least part of their sequence and

further wherein transcription of said nucleic acid molecule produces an RNA molecule which

forms a double stranded region by complementary base pairing of said first and second parts.

18. (Currently Amended) A The cell according to Claim 17 wherein said first and second

parts are linked by at least one nucleotide base.

19. (Currently Amended) A The cell according to Claim 11 wherein said cell is transformed

with a nucleic acid molecule comprising an expression cassette(s) which cassette(s) comprises a

nucleic acid sequence selected from the group consisting of:

i) a nucleic acid molecule comprising a nucleic acid sequence as represented in Figure

SEQ ID NO: 1 and Figure SEQ ID NO: 3 and/or Figure SEQ ID NO: 5;

ii) a nucleic acid molecule comprising a nucleic acid sequence which hybridises to the

sequence in (i) above and which glucosylates at least one monolignol;

iii) a nucleic acid molecule comprising a nucleic acid sequences which are degenerate as

a result of the genetic code to the sequences defined in (i) and (ii) above[[.]]

wherein said cassette is adapted such that both sense and antisense nucleic acid molecules are

transcribed from said cassette.

20. (Currently Amended) A The cell according to Claim 19 wherein said cassette(s)

comprises a nucleic molecule comprising a nucleic acid sequence as shown in Figure SEQ ID NO:

3 and Figure SEQ ID NO: 5 or a nucleic acid molecule which hybridises to a nucleic acid

Page 7 of 9

PATENT

. . . .

molecule comprising a nucleic acid sequence as shown in Figure SEQ ID NO: 3 and Figure SEQ ID NO: 5.

- 21. (Currently Amended) A <u>The</u> cell according to any of Claims 12 20 claim 12, wherein said expression cassette is part of a vector.
- 22. (Currently Amended) A <u>The</u> cell according to any of Claims 1-21 <u>claim 1</u>, wherein said transgenic cell is a eukaryotic cell.
- 23. (Currently Amended) A The cell according to Claim 22 wherein said cell is a plant cell.
- 24. (Currently Amended) A transgenic plant comprising a the cell according to Claim 23.
- 25. (Currently Amended) A <u>The</u> plant according to Claim 24 wherein said plant is a woody plant selected from: poplar; eucalyptus; Douglas fir; pine; walnut; ash; birch; oak; teak; spruce.
- 26. (Currently Amended) A method for modulating the lignin content of a plant comprising the steps of;
 - i) providing the cell of claim 1-a cell according to any of Claims-1-23,
 - ii) providing conditions conducive to growth of said cell into a plantlet and optionally,
 - iii) determining the lignin content of said plant.
- 27. (Currently Amended) A method of manufacture of paper or board from a transgenic plant exhibiting an altered lignin content comprising the steps of;
 - i) pulping the transgenic wood material derived from the transgenic plant according to Claim 24; and
 - ii) producing paper from said pulped transgenic wood material.
- 28. (New) The plant of claim 25, wherein said woody plant is poplar, eucalyptus, Douglas fir, pine, walnut, ash, birch, oak, teak, or spruce.